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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/825,418	04/03/01	AWAKURA	Y 0694-135

EXAMINER	
VU,Q	
ART UNIT	**PAPER NUMBER**
2841	

MMC2/1107
HOPGOOD, CALIMAFDE, JUDLOWE & MONDOLINO
60 EAST 42ND STREET
NEW YORK NY 10165

DATE MAILED: 11/07/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/825,418	Applicant(s) AWAKURA ET AL.	
	Examiner Quynh-Nhu H. Vu	Art Unit 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) 3,20,21 and 25 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4-19,22-24 and 26-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species I: Figs. 1-2.

Species II: Fig. 3.

Species II: Fig. 6.

Species IV: Fig. 7.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Bradley Ruben on 10/11/01 a provisional election was made without traverse to prosecute the invention of Species I, claims 1, 2, 4-19, 22-24 and 26-39. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3, 20-21 and 25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

DETAILED ACTION

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4, 7, 19, 22-24 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Higgins, III [US 5,639,989].

As to claims 1-2, 19, 22-24, Higgins, III discloses in Figs. 1 or 4 a wiring board comprising: an insulative base material (16); a conductor patterns (18) formed thereon; and magnetic thin films (26, also see col. 12, lines 25-30) formed on the conductor pattern along outer surface of the conductor pattern.

As to claim 4, the base material is configured of a flexible material (col. 5, lines 42-46).

As to claims 7 and 27, thickness of the magnetic thin film is about 5 - 500 μm (col. 7, lines 11-12) which is in the range of 0.3 to 20 μm.

As to claim 28, a wiring board (16) is a multi-layer printed wiring board comprising structure at least 3 layers.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5-6, 8-18, 26 and 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins, III.

As to claim 5, Higgins, III does not disclose the polyimide material for flexible material. However, it is well know in the art to polyimide material for flexible material. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to using the polyimide material for flexible material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended used as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

As to claims 6 and 26, the product-by-process limitation "sputtering and vapor deposition" has not been give weight in determining the patentability of the device claim. See MPEP §2113.

As to claims 8, 11-12, 14-18, 29-34 and 37-38, since it is well known in the art to employ the polyimide material for flexible material, as rejected in above. Therefore, the polyimide material having these properties such as: a frequency range (100 MHz- 10 GHz), relative

bandwidth bwr (not greater than 200%), μ_{max} = 50%, diameter of particle M (1 nm to 40 nm), anisotropic magnetic filed Hk (600 Oe or less = 4.74×10^4 A/m or less); size of saturation magnetization (80% to 60% and 60% to 35%); magnetic loss material exhibits a DC electrical resistivity (100 to 700 μΩcm or larger than 500 μΩcm). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ those value listed above, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

As to claims 9-10, 13 and 35-36, Higgins, III does not disclose the component of the magnetic loss material is at least one of C, B, Si, Al, Mg, Ti, Zn, Hf, Sr, Nb, Ta; rare earth elements; Fe_{α}-Al_{β}-O_{γ} and Fe_{α}-Si_{β}-O_{γ}. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to using the material listed above, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended used as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takayama et al. [US 5,977,783] disclose in Fig. 3 a conductor pattern (2c) formed on insulative base; and magnetic thin film (2e) formed on the conductor pattern.

Tanamoto et al. [US 6,208,000] disclose a mean particle diameter of particles M in the range of 1 nm to 50 nm (col. 10, lines 28-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh-Nhu H. Vu whose telephone number is 703-305-0850. The examiner can normally be reached on 7:30-5:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

QNV
October 22, 2001

KCUNEO
PRIMARY EXAMINER